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CURRENT STATE OF THE FUND OF UNPUBLISHED DOCUMENTS IN KAZAKH IN JSC «NC STI»

Представлен анализ востребованности и тематической направленности диссертаций и отчетов о НИР на казахском языке за период 1993-2010 гг. Рассмотрены наиболее популярные сферы применения казахского языка на примере диссертационного фонда информационных ресурсов научно-технической информации, формируемые в Республике Казахстан.

Ключевые слова: казахский язык, информационные ресурсы, востребованность, диссертационные фонды.



1993-2010 жж. кезеңінде қазақ тіліндегі ҒЗЖ туралы есептер мен диссертациялардың қажет етілуі мен тақырыптық бағыттарына талдау жүргізілді. Қазақстан Республикасында қалыптастырылған ғылыми-техникалық ақпараттар ресурстарының диссертациялық қоры негізінде қазақ тілін қолданудың ең кең тараған салалары қарастырылды.

Түйінді сөздер: қазақ тілі, ақпараттық ресурстар, қажет етушілік, диссертациялық қорлар.



The analysis of demand and thematic focus of theses and R&D reports in the Kazakh language for the period of 1993-2010 is provided. The most popular scope of Kazakh language usage in the example of the Dissertation Fund of the Information Resources of Scientific and Technical information generated in the Republic of Kazakhstan is considered.

Key words: Kazakh language, information resources, demand, dissertation funds.

During 1993-2010, in the system of training and certification of highly qualified personnel in the state language 4891 dissertations, including 617 doctoral and 4274 candidate, were defended that make up 20.4% of the total number of defended dissertations. Over a period of years, an increase of defenses of dissertations in Kazakh is permanently observed (figure 1).

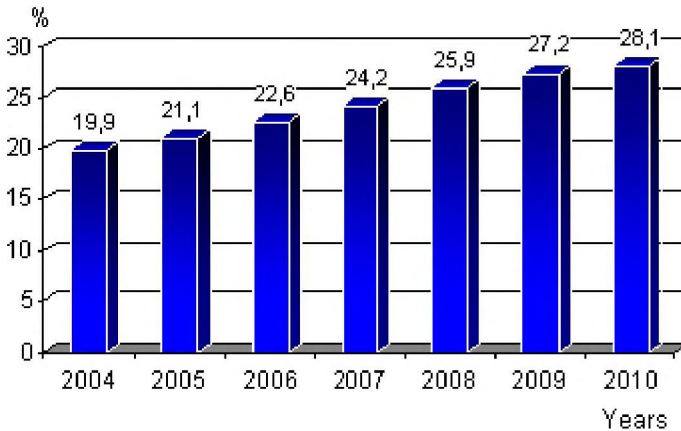


Figure 1. Annual percent of defense of dissertations in Kazakh to the total number defenses

In 1993, it was registered that there were 50 dissertations defended in Kazakh in 5 scientific directions, 31 dissertations of them in philological sciences, 11 in history and by one work in jurisprudence and philosophy.

In 2010, 1,168 dissertations in the state language in 20 scientific directions were registered. The greatest number of defenses took place on philology (222), pedagogics (213), History (130), Economy (100).

The number of defended dissertations from 1992 to 2010 is given in figure 2.

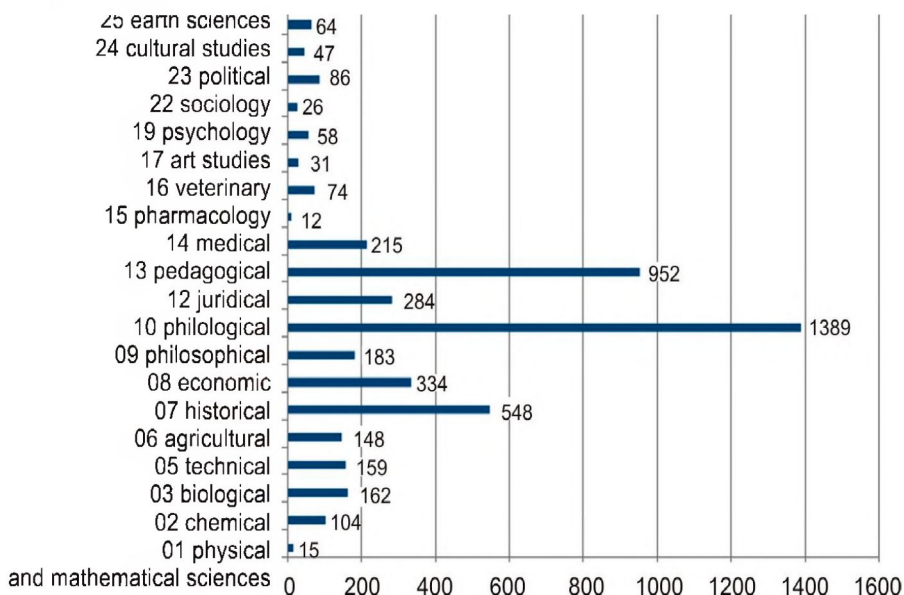


Figure2. Defended dissertations in Kazakh for 1992-2010 years

If in the first years of the formation of dissertations' funds in Kazakhstan, dissertations in Kazakh didn't exceed 1%, in 2010 already made 24.1%.

The impressive growth of this indicator is evidence of increase in the number of highly qualified specialists who hold scientific Kazakh language.

In connection with the reform of the system of training of highly qualified personnel and the termination of the order certification of scientific brainpower on assigning the degree of a candidate or doctorate of science which passed to a new single-stage system of PhD doctorate in 2011, comparative data on a ratio of annual number of the defended dissertations are submitted only till 2010.

The first PhD dissertations were defended in Kazakhstan in 2008 in 3 universities: Al-Farabi KazNU, L. N. Gumilyov ENU and KazNAU.

In the state language, PhD dissertations are defended in the amount of:

2008 – 3 (economic sciences-1 and biology-1, Chemistry-1);

2009 – 7 (history – 3, chemistry – 1, biology – 1, economics-1, jurisprudence –1);

2010-2012 (political sciences – 3, economics – 2, philology – 2, biology, history, technical, philosophy and earth science – by 1);

2011 – 1 (history);

2012 – 29 on 19 scientific directivities;

Below, data on the dissertations for the academic degree of a candidate and doctor of science, not including the PhD dissertations, are presented.

From the total amount of the dissertations which are in the fund, works in Kazakh were defended on 18 – 20 scientific specialties.

They are given on sectoral structure in Table 1 and Figure 3.

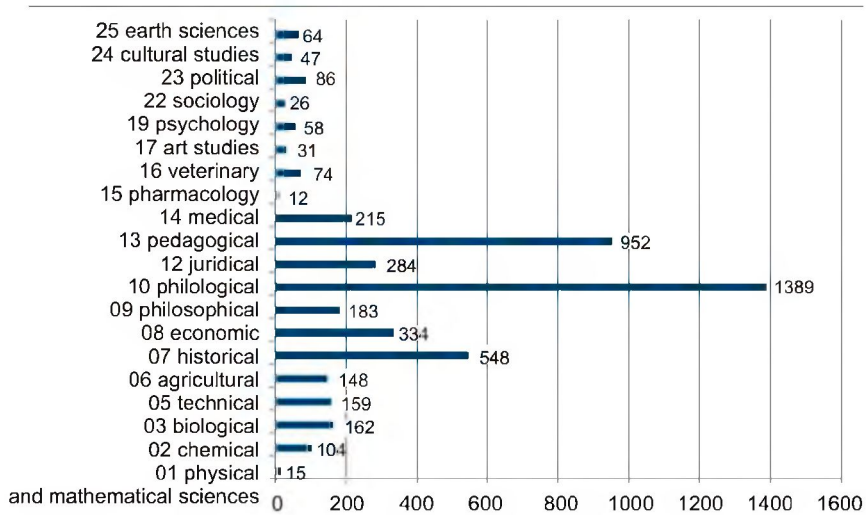


Figure 3. Sectoral structure of dissertations 1992-2010 years

It is possible to note that the main share of the dissertations in Kazakh is defended on social sciences and amounts 80.7% of the general Kazakh language fund. In particular, the defenses on philology dominate (28.4%), then on pedagogical specialties (19.5%) and dissertations on history (11.2%).

Technical and applied sciences account 12.5%.

Natural and exact sciences – 6.8% (figure 4).

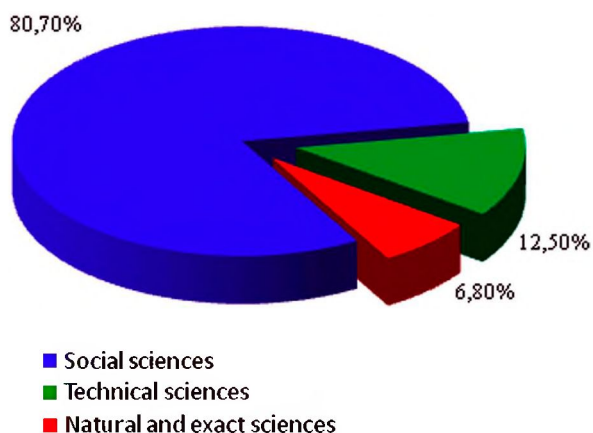


Figure 4. The thematic scope of the dissertations' fund in Kazakh language

It is possible to mark that the potential of knowledge and the scientific and technic results, accumulated in this fund is demanded to a certain extent.

JSC «NC STI» started conducting the study of demand of the unpublished documents' fund using the methodological approaches of Russian scientists V.V.Arutyunov and I.V.Marshakovoy [1-6] from 1996.

Table 1

Distribution of the dissertations defended in Kazakh language on scientific specialties for 1992-2010

Scientific specialty	The number of registered dissertations																Total	%
	1992-1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010			
01 physico-mathematical sciences	0	0	1	1	0	0	0	0	0	0	0	0	0	0	13	15	0,3	
02 chemical	1	1	3	5	5	4	5	3	4	7	7	9	9	13	29	104	1,9	
03 biological	3	2	1	3	7	7	9	3	8	12	15	12	11	23	45	162	3,3	
05 technical	4	1	2	2	7	0	1	3	5	4	9	10	22	14	75	159	3,4	
06 agricultural	1	0	0	0	3	1	1	4	7	8	8	16	17	26	56	148	3,0	
07 historical	51	16	16	43	25	27	37	20	29	16	31	43	25	39	130	548	11,2	
08 economic	3	4	1	7	9	11	7	13	21	11	26	37	34	50	100	334	7,0	
09 philosophical	13	4	9	10	8	8	13	7	4	6	19	12	17	12	41	183	3,7	
10 philological	134	53	57	99	56	63	78	68	82	73	108	132	54	110	222	1389	28,4	
12 juridical	4	5	3	7	4	10	17	12	17	13	30	36	29	39	58	284	5,8	
13 pedagogical	74	9	27	34	34	29	57	48	63	46	64	89	67	97	214	952	19,5	
14 medical	2	0	5	7	7	2	15	10	7	9	15	18	20	23	75	215	4,4	
15 pharmacology	1	0	1	0	0	0	1	3	2	0	0	1	0	1	2	12	0,2	
16 veterinary	0	0	0	1	1	2	3	4	2	0	4	8	11	14	24	74	1,5	
17 art studies	2	0	0	1	0	0	1	0	2	1	0	5	0	1	18	31	0,6	
19 psychology	1	1	2	2	0	4	6	3	2	7	1	2	8	10	9	58	1,2	
22 sociology	1	0	1	1	2	0	0	1	3	0	0	1	3	3	10	26	0,5	
23 political	3	1	2	7	5	3	3	3	8	4	7	9	5	8	18	86	1,7	
24 cultural studies	0	0	2	0	4	2	0	1	3	2	9	8	0	5	11	47	0,9	
25 earth science	3	0	1	0	2	2	6	3	5	1	6	8	0	9	18	64	1,3	
Total	301	97	134	230	179	173	260	209	274	220	359	456	332	497	1168	4891	100	

Such studies allow to determine the relevance of carried out operations on establishing the funds in Kazakh language. Assessment of demand and sectoral request for R & D and dissertations was carried out by using applied in practice Scientometrics of calculation indexes considering the number of requests for a material of the accumulated fund for a certain period of time: impact-factor, coefficients of request, demand and response [1-4].

In this case, the demand factor Df was applied. This is a scientometric indicator which reflects the ratio of the number of requests received for a certain time from various users to the number of requested documents. This coefficient shows how much the scientific and technical product is actual according to demand.

In other words, Df is the average value which determines the frequency of a requested dissertation.

Df is calculated on the formula:

$$Df = Z/D$$

where Z – is the number of requests for a considered period (in our case it is a calendar year),

D – is the number of requested documents.

Study of the problems of unpublished documents' demand becomes important, as from a practical point of view for the search of ways of their effective use, and from scientific to identify the most used part of the documentary sources and actual thematic directions of science.

The demand of the dissertations' fund is researched in a section of consumer categories, types of organizations, their territorial belonging and thematic orientation.

The conducted research of the demand for dissertations in Kazakh language, shows that in 2010 in comparison with 2004, interest in these dissertations increased by 7.4 times and the number of requests increased by 9.3 times (Figure 5).

However, from 2011 to 2013, it became to arrive a slightly smaller number of requests from consumers for which there is an objective

cause contained in the fact that there was a reform of the system of training of highly qualified personnel and as a result, the number of information consumers on the category of doctorate and candidates and post-graduate student was reduced.

As a result, in comparison with 2010, the volume of requests and the number of demanded documents was reduced by 13% in 2011. In the same year, 2181 requests were received to 1849 documents, i.e. on average each document was demanded 1.2 times.

In 2010, 45% of the general dissertations' fund which is available in Kazakh was used by information consumers and this indicator made 44.5% in 2011.

Below, the dynamics of the correlation of the requests' number from customers to the total number of requested documents for the period of 2004-2013 years is discussed. (figure 5).

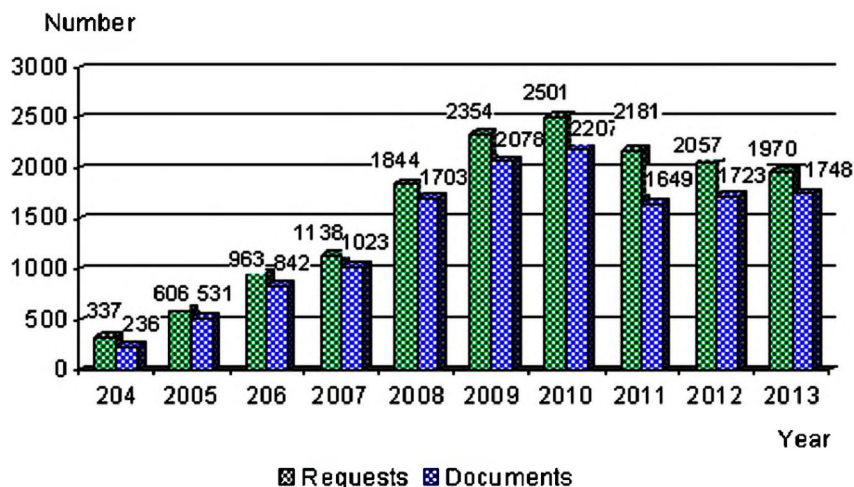


Figure 5. The dynamics of the correlation of the requests' number from customers to the total number of requested documents for the period of 2004-2013 years

In 2012, 1723 documents were demanded in 2057 requests, demand factor of each document was also 1.2. In 2013, 1791 documents were presented for 1970 requests. The factor was 1.1. During the covered period from 2009 to 2013, the average demand factor was the highest in 2012 (1,19), in remaining years, The Df equaled 1.13-1.18.

Thus, on average, every dissertation was demanded more than once.

By reviewing separate scientific specialties, it was found out that the dissertations in sociology had the highest demand in 2010 and 2012 (1,5 and 1,47 respectively). In other words, each requested dissertation on average was demanded 1.5 times. In other years, Df on the specialties of sociological orientation had a value of 1.2, but in 2013 it dropped to 1.05. In 2013, the highest Df=(1,3) was to the dissertations in pedagogy. Within the year, the greatest number of requests (497) has been received for the largest number of documents (382). But the greatest number of requests for pedagogical specialties falls on 2010 (835 requests for 730 documents).

Distribution of the requests which arrived on the dissertations in Kazakh, on scientific specialties and demand factor are provided in table 2.

The analysis of thematic orientation of the requested dissertations in Kazakh has revealed that during 2009-2013 years dissertations are demanded almost in all scientific specialties (table 2).

The rating of scientific specialties on which most Fund's dissertations are demanded, is given in table 3.

In 2010, pedagogy, philology and economic specialties were in the lead. In 2012 and 2013, the demand of dissertations in these directions also takes the first position.

The most requested dissertations in Kazakh language, as well as in previous years, were works in economy (in 2011, 588 requests for 425 dissertations, demand factor is 1.38), in pedagogy (in 2013,

Table 2

Distribution of the requests, arrived on the dissertations in Kazakh, on scientific specialties

Scientific specialty	Number of requested dissertations (documents)					Number of received requests					Demand factor Df				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
01 physical and mathematical sciences	1	–		1	1	1	–		1	11,0	–	–	1,0		1,0
02 chemical	–	6	11	5	5	–	6	12	5	5	–	1,0	1,1	1,0	1,0
03 biological	31	23	25	19	23	33	26	27	22	251,1	1,1	1,1	1,2		1,1
05 technical	11	14	11	11	10	14	15	11	11	101,3	1,1	1,0	1,0		1,0
06 agricultural	9	7	6	9	15	9	7	6	11	151,0	1,0	1,0	1,2		1,0
07 historical	187	133	156	132	143	206	139	172	167	1521,1	1,0	1,1	1,3		1,1
08 economic	289	291	425	277	298	356	384	588	382	3051,231,32	1,38	1,38			1,02
09 philosophical	25	34	47	37	42	27	35	49	43	491,1	1,0	1,0	1,16		1,17
10 philological	503	573	372	382	356	540	614	399	414	4281,1	1,1	1,1	1,1		1,2
12 juridical	153	221	311	303	310	171	235	353	311	3131,1	1,1	1,1	1,1		1,0
13 teaching	713	730	349	410	382	822	835	411	523	4971,151,14	1,18	1,27			1,3
14 medical	17	13	8	7	6	17	13	9	7	61,0	1,0	1,1	1,0		1,0
15 pharmacology	1		2	2	3	1		2	2	31,0		1,0	1,0		1,0
16 veterinary	2	5	1	1	2	2	5	1	1	21,0	1,0	1,0	1,0		1,0
17 art studies	4	5	5	5	8	4	5	6	5	81,0	1,0	1,2	1,0		1,0
19 psychology	44	64	55	49	40	51	77	58	58	421,2	1,2	1,1	1,2		1,05
22 sociology	9	15	5	17	40	11	22	6	25	421,2	1,5	1,2	1,47		1,05
23 political	44	39	28	29	29	53	45	34	36	321,2	1,2	1,2	1,24		1,1
24 cultural studies	19	21	16	14	11	20	23	20	15	111,0	1,0	1,2	1,1		1,0
25 earth sciences	16	13	16	13	24	16	15	17	18	241,0	1,1	1,1	1,38		1,0
Total	2078	2207	1849	1723	1748	2354	2501	2181	2057	19701,131,13	1,18	1,19			1,13

Table 3

Rating of the most demanded dissertations in Kazakh language in 2010

Rating	(cap. GRNTI) Scientific specialty	Number of requested documents	%, to total
1	13 pedagogical sciences	730	33,1
2	10 philological	573	25,9
3	08 economic	291	13,2
4	12 legal	221	10,0
5	07 historical	133	6,0
6	19 psychology	64	2,9
7	23 political	39	1,8
8	09 philosophical	34	1,5
9	03 biological	23	1,0
10	24 Cultural Studies	21	0,9
11	22 sociology	15	0,7
12	05 technical	14	0,6
13-14	14 medical	13	0,6
13-14	25 Earth sciences	13	0,6
15	06 agricultural	7	0,3
16	02 chemical	6	0,3
17-18	16 veterinary	5	0,2
17-18	17 art studies	5	0,2
Total	2207	100	

497 requests for 382 documents, $Df=1.3$), in philology (in 2013, respectively, 428 and 356, $Df=1.0,2$), in jurisprudence (313 and 310 $Df=1.0$). According to the findings, it is possible to state that the number of requested documents and arrived requests on them in 2011-2013 in pedagogy and philology was reduced almost twice in comparison with 2010. But interest to the documents in economics, jurisprudence, history, philosophy remains at the high level.

Scientific directions on social sciences entered into the top ten of most demanded documents. The demand for the documents in

Kazakh language on such disciplines as agricultural, veterinary, technical, ecology and other scientific specialties remains unsatisfied, due to the fact that the fund's works in Kazakh on these specialties are not enough.

Research assistants, teaching staff faculty and students of KazNPU Abai (328 requests for the documents on 12 scientific specialties including 164 requests for pedagogical orientation), Al-Farabi KazNU (respectively 273 and 14, the greatest number of requests is made on jurisprudence – 77), KazaSWTTU (Kazakh State Women's Teacher Training University) (181 and 12, including 75 requests on pedagogy) and etc.

Analyzing the NC STI stored dissertation fund, it is revealed that the dissertations in Kazakh language amount 20.4% of the total number.

In the fund of reports on R&D the language correlation is different. The total number of reports registered in the period of 1995-2013 is 24393, and only 692 are provided in Kazakh that makes 2.8%. This is 10 times smaller than the share of dissertations in Kazakh. However, it is necessary to note the positive tendency of the number growth of researches executed in Kazakh: 2006 – 28; 2007 – 64; 2008 – 73 (table4).

Table 4

Distribution of registered reports on research during 1995-2012

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003
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Number of registered reports on research	2	4	21	10	12	32	7	7	24
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Table 4 continued

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
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Number of registered reports on research	17	24	28	64	73	118	45	70	130
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Most part of the registered reports are on humanities – 87.0%, share of technical is 10.8% and the minimum number of works is on natural and exact sciences – 2.2% (figure6).

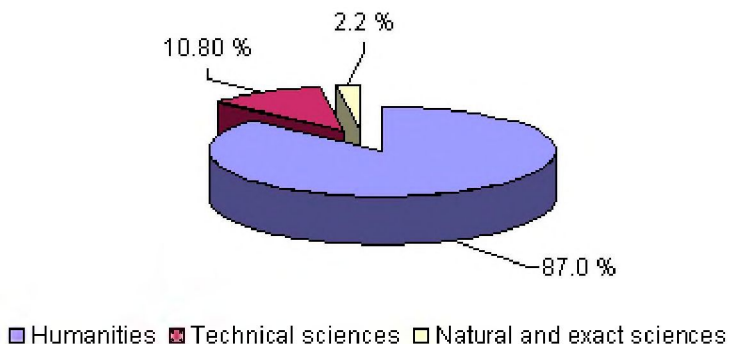


Figure 6. Percentage ratio of thematic coverage of the registered reports on research

Analysis of the demand for reports on research in Kazakh language has shown that the demand is not high enough because of their small number.

Conclusions

1. The total volume of demand for documents from the cumulative fund of dissertations is constantly growing and amounts 7.2%. The demand of the dissertations' fund in Kazakh language has reached 35.74% from its volume and they are in annually increasing demand.

2. There is an acute need in the publication of abstract journals and collections of abstracts of (R&D) in Kazakh language, because until now they have come out only in Russian.

3. Currently, only one database in Kazakh language is created, this is a database of the dissertations defended in Kazakh, but it is not adapted to users' work, therefore it is necessary to regularly engage in adaptation.

4. It is expedient to publish the editions of collections of abstracts on R&D and on paper and in electronic form and it is necessary to pay attention to the mechanism of advertising, announcing and mailing on regions. Then the potential of knowledge and the scientific and technological results accumulated in Kazakhstan in R&D state funds of dissertations and deposited manuscripts in Kazakh language will be demanded in due measure and will become an effective scientific, educational and economic resource of the country.

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